

Enhanced Public Health Surveillance Activities in Miami-Dade County for Super Bowl XLI

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OBJECTIVE

To identify unusual patterns of communicable diseases, health events or bioterrorism-related activity in Miami-Dade County immediately before, during and after Super Bowl XLI.

BACKGROUND

A large event such as the Super Bowl that attracts over 120,000 visitors to an area within a short period of time has the potential to increase the risk of communicable diseases and environmental hazards in a community in addition to the possibility of a bioterrorist attack. Though MDCHD has in place a syndromic surveillance system, additional public health measures were implemented to ensure the health and safety of all residents and visitors in the weeks surrounding the February 4th event.

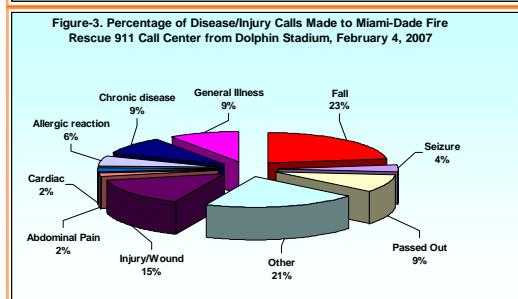
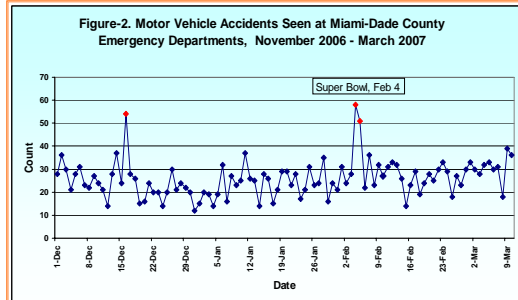
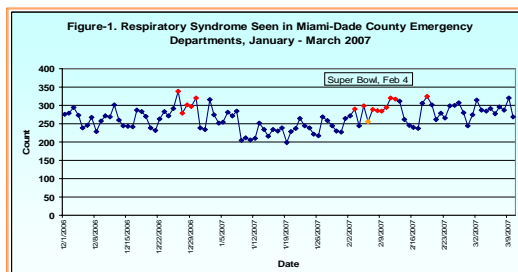
METHODS

MDCHD utilized four surveillance systems, which included the Biological Warning and Incident Characterization (BWIC) system to support the BioWatch program, the Electronic Surveillance System for the Early Notification of Community Based Epidemics (ESSENCE), the Miami-Dade Fire Rescue 911 Call Center data and school absenteeism data received from the Miami-Dade County Public School System. 911 calls are grouped into 96 different categories. Also, Infection Control Practitioners (ICPs) from the county's thirty-four hospitals submitted daily reports to MDCHD for the week before and after the event.

RESULTS

BioWatch air samplers collected were all non-reactive and therefore BWIC was utilized in monitor mode rather than project mode. The daily total ED visits for Miami-Dade County residents progressively increased each of the 4 days after the Super Bowl to 2,448 (2,425-2,584) from the average of 2,315 for the first two months of 2007. ESSENCE detected a significant increase of cases with Respiratory Syndrome lasting for 8 days after Super Bowl Sunday. Historically, respiratory syndrome alerts have lasted for a maximum of 5 days (Figure 1). Both ESSENCE and 911 call center data detected a statistically significant increase in the number of motor vehicle accidents on the day of and one day after the Super Bowl (Figure 2). Notably, 25% of all 911 calls on the day of the Super Bowl were made from Dolphin Stadium. This included falls, injuries as

well as general illness (Figure 3). Finally, 104 of the 392 public schools had above 8% absenteeism on the day after the Super Bowl, which is a 143% increase from the mean number of schools with that percentage of absenteeism. However, the data can not determine whether or not absenteeism was due to illness or to the event.



CONCLUSIONS

Although no communicable disease outbreak or bioterrorism event was detected during the days surrounding these festivities, the Super Bowl had a public health impact on the community as evidenced by an increase in respiratory syndrome cases, motor vehicle accidents and school absenteeism during that period. MDCHD will use this information to optimize planning for future events and contribute to preventive interventions aimed at reducing the impact that large public gathering events may have on our community.